

Institutional Animal Care and Use Committee		UNTHSC
Title: Hazardous Materials used in Animals		
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A. BACKGROUND INFORMATION

- a. Hazardous materials are biological, chemical, radiological or physical items which have the potential to cause harm to humans, animals, or the environment. These materials are either hazardous on their own or they have the potential to be hazardous through interaction with other factors.
- b. The use and disposal of hazardous materials is regulated by several agencies, including: the CDC, OSHA, TCEQ and the Department of Health and Human Services. These regulations must be followed by all personnel who may have contact with hazardous materials and DLAM facilities are capable of containing such hazards. For this reason, Principal Investigators must discuss any radioactive or biohazardous materials with the relevant safety committees before submitting an animal use protocol.

B. RESPONSIBILITIES

- a. It is the responsibility of the Principal Investigator to receive approval from the Institutional Biosafety Committee (IBC) prior to using hazardous materials.
- b. It is the responsibility of the Principal Investigator, students and staff to receive proper training for the hazardous material to be used.

C. PROCEDURES

- a. Biohazards
 - i. Biohazards can be defined as biological agents and materials which are potentially hazardous to humans, animals, or the environment. This includes: microbial pathogens, parasites, recombinant DNA, synthetic DNA, cell cultures containing potentially infectious agents (ie. viroids, prions), and other infectious agents as outline by the IBC.
 - ii. An email consultation with Environmental Health and Safety should be made in preparation of the IACUC protocol when using a hazardous agent.
 - iii. A consultation with the DLAM (Department of Laboratory Animal Medicine) Facility Manager must be conducted for the use of a biohazard in the animal facility. An email containing the IACUC Protocol, the Safety Data Sheet, and any details from the Safety consult should be sent to the DLAM Facility Manager in order to begin the consultation.
 - iv. Any correspondence with the Biosafety Officer and the DLAM Facility Manager regarding the biohazard (treatment of animals, cages, etc.) must be attached to the protocol, along with the Hazardous Agent Attachment Form.
 - v. Biohazardous agents must be approved on an IBC protocol, before approval can be granted on an IACUC protocol proposing to use biohazardous agents.

- b. Radioactive material
 - i. Radioactive material is any substance that emits radiation. Exposure to radiation could pose serious health risks to personnel and to the community if improperly used or disposed. Radioisotopes, the unstable atoms, or isotopes that emit the radiation, are commonly used in research.
 - ii. The Environmental Health and Safety Office provides radioactive safety training, response to radioactive contamination or misuse issues, and radioactive waste removal.
 - iii. An email consultation with the Radiation Safety Officer should occur when considering the use of radioisotopes in an animal protocol.
 - iv. An email consultation with the DLAM Facility Manager must be conducted to discuss the use of a radioactive substance in the animal facility. The email should contain a copy of the IACUC protocol along with any correspondence from the Radiation Safety Officer.
 - v. Any correspondence with the Radiation Safety Officer and the DLAM Facility Manager regarding the radioactive substance (treatment of animals, cages, etc.) must be attached to the protocol, along with the Hazardous Agent Attachment Form..
 - vi. Radioisotopes must be approved by the Radiation Safety Committee (RSC) before approval can be granted to the IACUC protocol.
- c. Chemical Hazards
 - i. A chemical hazard is any chemical that has the potential to cause harm to people, animals, or the environment. These can include: flammable liquids or solids, corrosives, oxidizers, toxins, carcinogens, flammables, corrosives, mutagens, reproductive hazards and sensitizers.
 - ii. It is the responsibility of the investigators to monitor the use and disposal of chemical hazards in the laboratory.
 - iii. The IACUC may require justification as to why a safer compound cannot be used.
 - iv. An email consultation with the Environmental Health and Safety office should occur when considering the use of chemical hazards in an IACUC protocol.
 - v. An email consultation with the DLAM Facility Manager must be conducted to discuss the use of hazardous chemicals in the animal facility.
 - vi. Any correspondence with the Safety Officer and the DLAM Facility Manager regarding the hazardous chemical (treatment of animals, cages, etc.) must be attached to the protocol, along with the Hazardous Agent Attachment Form..
 - vii. Hazardous chemicals must be approved on an IBC protocol before approval can be granted on the IACUC protocol.
- d. Notification and Signage
 - i. When animals are to be dosed with a hazardous chemical or radioisotope, a lab member must notify the DLAM Facility Manager at least five business days in advance and send a dosing schedule and a copy of the Safety Data Sheet for the substance.
 - ii. The Hazardous Materials Form must be filled out and sent to the DLAM Facility Manager. This will be printed and placed in the animal room and on the outside

of the animal room door before dosing occurs and will remain until there is no longer a hazard.

- iii. The Facility Manager will have biohazard cage cards available for the animals that will receive the hazardous substance. The lab staff is responsible for filling out the biohazard card and placing it on the animal cage. This way, the people changing the cages will know that the cage is considered hazardous.

e. Cage Changing

- i. Unless otherwise noted in the approved IBC protocol, cage changes with animals that received a hazardous substance will be changed no earlier than 48 hours after the dosing has ceased.
 - ii. The IBC Protocol should describe the disposal of bedding based on the agent used.
 - iii. If cage is mostly soiled (i.e. soon to require a cage change), change the cage prior to dosing or arrange with DLAM, if DLAM staff will be responsible for changing cages.
 - iv. Only open cages under appropriate biosafety type cabinet and/or proper PPE.
- f. Please refer to the Institutional Safety Manuals (Chemical safety manual, Biological Safety Manual, Radiation Safety Manual at <https://www.unthsc.edu/safety/>) for more information on hazardous materials, including proper disposal.

D. ATTACHMENT

- a. [Hazardous Materials Form](#)
- b. [Hazardous Agent Attachment Form](#)
- c. [Biological Safety Manual](#)
- d. [Chemical Safety Manual](#)
- e. [Radiation Safety Manual](#)